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10/506,440	09/02/2004	Youichi Macda	8013-1207	8350

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EXAMINER	
WANG, QUAN ZHEN	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

SJ

Office Action Summary	Application No.	Applicant(s)	
	10/506,440	MAEDA, YOUICHI	
	Examiner	Art Unit	
	Quan-Zhen Wang	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 September 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/2/04,9/7/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. In accordance with the best understanding of the present specification, the claimed invention is about a method and system of controlling steering devices using infrared signals.

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The whole specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Applicant is advised that no new matter should be introduced. Examples of some unclear, inexact or verbose terms used in the specification are:

a) "The present invention relates to an infrared steering system for steering with use of an infrared ray a device which receives a radio signal through a means for transmitting a radio signal." (page 1, lines 6-8). Firstly, in accordance with the best understanding of the present invention, the infrared ray is related to the utilization of infrared signals to remotely control steering devices. Nowhere does the instant specification disclose steering "with use of an infrared ray". Secondly, a means for transmitting a radio signal is different from a means for receiving a radio signal.

b) "Furthermore, **the infrared steering method** according to the present invention for controlling a plurality of infrared controlled devices with a plurality of infrared controlling devices is characterized in that a matching signal is identified as a signal for the infrared controlled device in comparison with a time interval between the termination time of a start signal and the initiation time of a steering signal transmitted by the infrared controlling device with **a specific time interval previously fixed in every infrared controlled device**." (page 3, lines 4-11, emphasis added). It's not clearly what the recited specification means. It is not clear how "a specific time interval" can be fixed in a device.

c) "The infrared controlling device may output the start signal when the infrared signal transmitted by the other infrared controlling device with the synchronization signal is received and **may output the start signal after outputting** the synchronization signal **when free**." (page 3, lines 15-18, emphasis added).

d) "... **and is an object setting means for providing an object identification information** for specifying the steered object. The ID switch 24 is constituted as a variable switch capable of setting by a user. **Furthermore, the ID switch is not limited to three bits. Larger the number of bits, more steerable cars available**." (page 7, line 23 to page 8, line 4, emphasis added). In accordance with the best understanding of the specification, the increasing of the number of bits of

the ID switch does not increase the number of steerable **cars**. It only increases the number of available ID's for controlling cars.

Drawings

3. The drawings are objected to because descriptive labels are need for the pulses shown in fig.4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 6-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 6 claims "an infrared steering system" followed by limitations directed to the use of the "system". Therefore, claim 6 is considered as a single means claim. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983)

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is narrative in form and replete with indefinite and functional or operational language. The steps of the method must be clearly and positively specified. The limitation of "... is identified" is not a positive or active step.

Claim 1 recites the limitation "the infrared controlled device" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. There are "a plurality of infrared controlled devices" introduced prior to the limitation and it is not clearly which one of the "plurality of infrared controlled devices" is "the infrared controlled device".

Claim 1 recites the limitation "the infrared controlling device" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. There are "a plurality of infrared controlling devices" introduced prior to the limitation and it is not clearly which one of the "plurality of infrared controlling devices" is "the infrared controlling device".

Claim 1 recites the limitation of "a specific time length previously fixed in every infrared controlled device". However, it is unclear what the cited limitation means.

Claim 3 recites the limitation "the synchronization signal" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. The "synchronized signal" is not introduced prior to the limitation.

Claim 3 recites the limitation of " An infrared steering method according to claim 1, characterized in that the infrared controlling device outputs the start signal when the infrared signal transmitted by another infrared controlling device with the synchronization signal is received and outputs the start signal after outputting the synchronization signal when free." The claim contains unclear recitations apparently resulting from translation. For example, it is unclear what it means by "when free".

Claim 4 recites the limitation of "An infrared steering method according to claim 1, characterized in that a specific time length previously fixed in every infrared controlled device of the time interval between the termination time of the start signal and the

initiation time of the steering signal is determined in accordance with a layout of the switch provided in an ID setting section of the infrared controlling device." The claim contains unclear recitations apparently resulting form translation. The intended limitations of the claim therefore cannot be distinguished with accuracy. For example, it is not clear what is means by the phrase "a specific time length previously fixed in every infrared controlled device". It is unclear how "a specific time length" can be "previously fixed in every infrared controlled device". In accordance with the best understanding of the present specification, a start signal and a steering signal are transmitted from a controlling device, not generated within a controlled device.

Claim 5 recites the limitation "the synchronization signal" in line 2. There is insufficient antecedent basis for this limitation in the claim. The "synchronized signal" is not introduced prior to the limitation.

Claim 6 is narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

Claim 6 recites the limitation "the matching signal" in line 3. There is insufficient antecedent basis for this limitation in the claim. The "matching signal" is not introduced prior to the limitation.

Claim 6 recites the limitation "the infrared controlled device" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. There are "a plurality of

infrared controlled devices" introduced prior to the limitation and it is not clearly which one of the "plurality of infrared controlled devices" is "the infrared controlled device".

Claim 6 recites the limitation "the start signal" in line 5. There is insufficient antecedent basis for this limitation in the claim. The "start signal" is not introduced prior to the limitation.

Claim 6 recites the limitation "the steering signal" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. The "steering signal" is not introduced prior to the limitation.

Claim 6 recites the limitation "the specific time interval" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. The "specific time interval" is not introduced prior to the limitation.

Claim 6 claims a "system" which performances function of "matching" a signal, but, since the claim does not set forth any elements or structure involved in the performance of the function, the claim is indefinite.

Claim 7 recites the limitation "the other infrared controlling device" in line 6. There is insufficient antecedent basis for this limitation in the claim. The "other infrared controlling device" is not introduced prior to the limitation.

Claim 8 recites the limitation of "An infrared steering system according to claim 6, characterized in that the infrared controlled device is provided with a self setting means for providing a self-identification information, a means for extracting a self steering information from a reception signal by the self-identification information, a signal converting means for converting the extracted steering information into a driving signal,

a drive controlling means for operating a driving means in response to the driving signal." The claim contains unclear recitations apparently resulting from translation. For example, it is not clear what it means by the phrase of "a self steering information".

Claim 9 is narrative in form and replete with indefinite and functional or operational language. The steps of the program must be clearly and positively specified.

Claim 9 recites the limitation "the matching signal" in line 3. There is insufficient antecedent basis for this limitation in the claim. The "matching signal" is not introduced prior to the limitation.

Claim 9 recites the limitation "the infrared controlled device" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. There are "a plurality of infrared controlled devices" introduced prior to the limitation and it is not clearly which one of the "plurality of infrared controlled devices" is "the infrared controlled device".

Claim 9 recites the limitation "the start signal" in line 5. There is insufficient antecedent basis for this limitation in the claim. The "start signal" is not introduced prior to the limitation.

Claim 9 recites the limitation "the steering signal" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim. The "steering signal" is not introduced prior to the limitation.

Claim 9 recites the limitation "the specific time interval" in lines 6-7. There is insufficient antecedent basis for this limitation in the claim. The "specific time interval" is not introduced prior to the limitation.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claim 9 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 9 claims a program. However, a program per se is non-statutory subject matter in accordance with MPEP.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Welch et al. (U.S. Patent US 5,903,373) in view of Mizuta et al. (U.S. Patent US 5,737,335).

Regarding claims 1, 6, and 9, as they are best understood in view of the above 112 problems, Welch disclose a method (figs. 1 6) for controlling a plurality of infrared controlled devices (fig. 1, remote stations 14) characterized in that communication between controller and controlled devices is based on pre-assigned waiting period that will begin upon the reception of a synchronization frame (RSYNC, MRSYNC, DSYNC, and EDSYNC). Welch differs from the claimed invention in that Welch does not

specifically disclose to compare a time interval between the termination time of a start signal and the initiation time of transmitted signal with a predetermined time interval parameter to identify a target device. However, it is well known in the art to compare a time interval between the termination time of a start signal and the initiation time of transmitted signal with a predetermined time interval parameter to identify a target device. For example, Mizuta discloses controlling a plurality of controlled devices (for example, fig. 4, slave nodes A, B) with a plurality of controlling devices (column 1, lines 8-14), characterized in that a matching signal identified as a signal for a signal for a controlled device by comparing a time interval between the termination time of a start signal (fig. 4, start pulse) and the initial time of a data signal (fig. 4, data transmitted from master node device to slave node devices; column 9, lines 13-37). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate the target identification technique of Mizuta in the controlling system of Welch in order to effectively transmit and receive data formed of a plurality of bits among a plurality of transmitting and receiving devices (Mizuta: column 1, lines 15-22).

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw
7/2/2007

Quan-Zhen Wang